川藏渝高山新竹类

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摘 要 发表了产于四川西部和西藏南部的箭竹属各一新种,它们分别是打母牛和扭马。首次补充描述了箭竹属圆芽箭竹组(Sect. Ampullares Yi)中原产于重庆东部的窝竹花果形态,从而更进一步证实了该组应为箭竹属成员。

关键词 打母牛;扭马;新种;窝竹;补充;中国

Alpine New Bamboos from Sichuan, Tibet and Chongqing China

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Abstract Two new species of Bambusoidiae, *F. damuniu* Yi et J. Y. Shi, *Fargesia yajiangensis* Yi et J. Y. Shi, is described and illustrated from N. Sichuan & S. Tibet, China. This paper gives the supplementary descriptions about the character of the flower and fruit of *Fargesia brevissima* Yi, it is also first recorded for *Fargesia* Franchet emend. Yi Sect. Ampullares Yi.

Key words *Fargesia damuniu* Yi et J. Y. Shi; *Fargesia yajiangensis* Yi et J. Y. Shi; new species; supplement; China

打母牛(藏语译音,西藏聂拉木) 新种 图1

Fargesia daminiu Yi et J. Y. Shi, sp. nov. Fig. 1

Species similes *Fargesia yajiangensi* Yi et J. Y. Shi, a qua differt internodiis culmi glabris, leviter sulcatis ad basim latus ramigeni; ramis tantum 3~5 in quoque nodo, 15~25 cm longis; vaginis culmi glabris, huad ciliates, laminis minoribus, 0.5~1.5 cm longis, 1.5~3 mm latis; laminis foliorum basi orbiculatis vel lato-cuneatis, subtus viridulis.

Rhizomata sympodialia; colla culmi 2~3.5(4) cm longa, 1~1.7 cm crasso. Culmi caespitosi, 1.5~2 m alti, 0.5~1 cm diametro, apice erecti; internodiis cylindricis sed leviter sulcatis ad basim latus ramigeni, (5)12~16(20) cm longis, viridibus nonnunquam purpureis, vetule luteolo-viridibus, infra nodos annulate farinosis, nitidis, glabris, lingo 1.5~2.5 mm crasso, medullis obtritis; nodi vaginarum prominentes, glabri vel nonnunquam luteolo-brunneo-seti; nodi culmi leviter prominentes; intranodiis 1~2 mm altis. Gemma 1, tenuis, adpressa. Rami 3~5 in quoque nodo, basi adpressa, erecti vel patentes, 15~25 cm longi, 1~1.5 mm crassi, virides vel purpurei. Turiones virides, purpureo-striati, glabri vel nonnunquam sparse brunneo-setulosi; Vaginae culmorum sero caducae vel persistentes, saepe internodiis breviorae vel raro leviter longiorae, dorso glabrae, haud ciliatae; auriculae et setae orales nullae; ligulae curvae vel arcuatae, viridulae, c. 0.5 mm altae;

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收稿日期:2007-01-30

laminae erectae raro reflexae, triangulatae vel lineari-longo-triangulatae, virides, glabrae, 0.5 ~ 1.5 cm longae et 1.5 ~ 3 mm latae. Folia 2 ~ 4 in quoque ramulo; vaginae viridulae, glabrae, haud ciliatae; auriculae et setae orales nullae; ligulae oblique truncatae, viridi-purpureae vel purpureae, glabrae; petioli 1 ~ 2 mm longi, viriduli; laminae ovato-lanceolatae vel lanceolatae, 3 ~ 7.5 cm longae et 4 ~ 10 mm latae, apice acuminatae, basi orbiculatae vel lato-cuneatae, subtus viridulae, glabrae, nervis secundariis 2-3-jugis, nervillis transversis rectangulari-longo-tessellatis, margine serrulatae. Inflorescentia ignota. Turiones Majo germinantes.

Xizang(西藏): Nielamu(聂拉木), among thickets or pure group, alt. 3 300 ~ 3 750 m, 2006 – 08 – 13, Yi Tongpei(易同培)06052(holotype, SIFS = SAUD).

地下茎合轴型,秆柄长 2 ~ 3.5(4) cm,**直径** 1 ~ 1.7 cm。**秆丛生,高** 1.5 ~ 2 m,**直径** 0.5 ~ 1 cm,**直立;节间圆筒形,但在分枝一侧基部稍具沟槽,长**(5)12 ~ 16(20) cm,**绿色,有时带紫色,老时黄绿色,节下常被一圈白粉,平滑,无毛,秆壁厚** 1.5 ~ 2.5 mm,**髓锯屑状;箨环隆起,无毛或有时被黄棕色刺毛;秆环稍隆起;节内高** 1 ~ 2 mm。**秆芽** 1 **枚,细瘦,贴生。秆每节分枝** 3 ~ 5 **枚,基部贴秆,直立或锐角开展,长** 15 ~ 25 cm,**粗** 1 ~ 1.5 mm,**绿色或紫色。笋绿色,有紫色脉纹,无毛或有时被稀疏棕色小刺毛;箨鞘迟落或宿存,通常短于节间或稀稍长于节间,背面无毛,边缘亦无纤毛;箨耳和鞘口繸毛缺失;箨舌弧形或拱形,淡绿色,高约** 0.5 mm,**无毛;箨片三角形或线状长三角形,直立,稀外翻,绿色,无毛,长** 0.5 ~ 1.5 cm,**宽** 1.5 ~ 3 mm。**小枝具叶** 2 ~ 4 **枚;叶鞘淡绿色,无毛,边缘无纤毛;叶耳及鞘口繸毛缺失;叶舌斜截形,绿紫色或紫色,无毛;叶柄长** 1 ~ 2 mm,**淡绿色;叶片卵状披针形或披针形,长** 3 ~ 7.5 cm,**宽** 4 ~ 10 mm,**先端渐尖,基部圆形或阔楔形,两面无毛,下面淡绿色,次脉** 2 ~ 3 **对,小横脉组成长方形,边缘具细锯齿。花枝未见。笋期** 5 **月。**

本种近似扭马(*Fargesia yajiangensis* Yi et J. Y. Shi)**,不同在于秆的节间无毛,分枝一侧基部稍具沟槽;枝条在秆每节上** 3 ~ 5 **枚,长** 15 ~ 25 cm;**箨鞘背面无毛,缺缘毛,箨片较小,长** 0.5 ~ 1.5 cm,**宽** 1.5 ~ 3 mm;**叶片基部圆形或阔楔形,下面淡绿色。**

扭马(藏语译音,四川雅江) 新种 图2

Fargesia yajiangensis Yi et J. Y. Shi, sp. nov. Fig. 2

Species affinis *Fargesia nitidae* (Mitford) Keng f. ex Yi, sed internodiis superne brunneo-setosis; vaginis culmi delapsis, saepe internodiis brevioribus, dorso dense adpresso-brunneo-setosis, ciliatis, setis oralibus erectis, laminis saepe erectis; laminis foliorum utrinque viridibus, nervis secundariis 2 ~ 3-jugis differt.

Colla culmi 8 ~ 14 cm longa, 0.8 ~ 1.5 cm crassa. Culmi caespitosi, 2 ~ 2.5 m alti, 0.5 ~ 1(1.5) cm diametro, apice erecti; internodiis cylindricis, (5)15 ~ 19(22) cm longis, juventute cinereo-viridibus, laevigatis, leviter farinosis, brunneo-setosis infra nodos, lingo 3 ~ 4(5) mm crasso; nodi vaginarum primo viriduli, glabri; nodi culmorum leviter prominentes; intranodiis 3 ~ 4(5) mm altis, deorsum gradatim gracilescentibus. Rami 10 ~ 16 in quoque nodo, graciles, patentes, 15 ~ 40 cm longi, 1 ~ 1.5 mm crassi. Vaginae culmorum delapsae coriaceae, vivo viridulae, saepe internodiis breviorae, nonnunquam leviter longiorae in basi culmi, apice triangulatae, dorso dense adpresso-brunneo-setosis et brunneo-ciliatae; auriculae nullae, setae orales paucae, erectae, usque ad 5 mm longae; ligulae arcuatae, primo viridulae, glabrae, c. 1 mm altae; laminae triangulatae vel lineari-lanceolatae, erectae raro reflexae, virides, glabrae, 0.7 ~ 7.5 cm longae, 3 ~ 5.5 mm latae, margine scabridae. Folia 2 ~ 3 in quoque ramulo; vaginae 3 ~ 3.5 cm longae, glabrae, haud ciliatae; auriculae et setae orales nullae; ligulae purpureo-virides, c. 0.5 mm altae; petioli c. 1 mm longi; laminae lineari-lanceolatae, papyraceae, 3 ~ 6 cm longae, 4 ~ 5.5 mm latae, apice acuminatae, basi cuneatae, utrinque virides, glabrae, nervis secundariis 2 ~ 3-jugis, nervillis transversis rectangulari-longo-tessellatis, margine serrulatae. Inflorescentia ignota. Turiones Julio germinantes.

Sichuan(四川): Yajiang(雅江), Magezong(麻格宗), under forest, alt. 3 300 m, 2006 – 08 – 03, Yi Tongpei(易同培)06050(holotype, SIFS = SAUD).

秆柄长 8 ~ 14 cm,**粗** 0.8 ~ 1.5 cm,**节间平滑。秆丛生,高** 2 ~ 2.5 m,**直径** 0.5 ~ 1(1.5) cm,**梢部**

直立;节间圆筒形,长(5)15~19(22)cm,幼时灰绿色,平滑,稍被白粉,节下方被棕色刺毛,中空,秆壁厚3~4(5)mm;箨环初时淡绿色,无毛;秆环稍肿起;节内高3~4(5)mm,向下渐变细。秆每节分枝10~16枚,纤细,斜展,长15~40 cm,粗1~1.5 mm。箨鞘革质,脱落性,新鲜时淡绿色,短于节间或有时基部数节略长于节间,先端三角形,背面密被贴生棕色刺毛,边缘具棕色纤毛;箨耳缺失,鞘口两肩各具数条直立縫毛,其毛长达5 mm;箨舌弧形,新鲜时淡绿色,高约1 mm,无毛;箨片三角形或线状披针形,直立或少有外倾,绿色,无毛,长0.7~7.5 cm,宽3~5.5 mm,边缘稍粗糙。小枝具叶2~3枚;叶鞘长3~3.5 cm,无毛,亦无缘毛;叶耳及鞘口縫毛缺失;叶舌紫绿色,无毛,高约0.5 mm;叶柄长约1 mm;叶片狭窄,线状披针形,纸质,长3~6 cm,宽4~5.5 mm,先端渐尖,基部楔形,两面绿色,无毛,次脉2~3对,小横脉明显,组成长方形,边缘具细锯齿。花枝未见。笋期7月。

本种近似华西箭竹(*Fargesia nitida*(Mitford)Keng f. ex Yi),但节间上部被棕色刺毛;秆箨脱落性,常短于节间,背面密被贴生棕色刺毛,有缘毛,鞘口具直立縫毛,箨片通常直立;叶片两面绿色,次脉2~3对,易于区别。

窝竹 黄竹、龙头竹、蛇尾竹(均重庆巫溪) 图3

Fargesia brevissima Yi in Bull. Bot. Res. **5**(4):128. fig. 5. 1985;D. Ohrnb. Gen. Fargesia 17. 1988;S. L. Zhu et al., A Comp. Chin. Bamb. 175. 1994;Fl. Reip. Pop. Sin. **9**(1):402. pl. 109:6~8. 1996;T. P. Yi, Bamb. Fl. Sichuan 201. pl. 71. 1997. & Fl. Sichuan. **12**:180. pl. 61:1~6. 1998;Fl. Chin. **22**:78. 2006.

Racemi terminati arcti purpurei, 3~3.5(4) cm longi, multispiculos et 3~4-spathas in base instructi; spathis longitudine racemes paulo superantibus, primo apice deminute foliaceis, inflorescentiis expositis e ore. Pedicelli 1~1.5(2) mm longi, glabri; spiculae 3~5-florae, 1.2~1.5 cm longae, glabrae; rhachilla articuli 0.5~1 mm longi; glumae 2, lanceolatae, glabrae, prima 6~10 mm longae, secunda 10~13 mm longae; lemma 1.3~1.5 cm longum, papyraceum, 5-nervis, apice longi-setoso-acuminatum; palea 8-9 mm longa, dorso bicarinata, breviter ciliata ad carinas, apice cuspidate bifissa; lodiculae 3, duabus anterioribus c. 1 mm longae, una poateriore c. 1.5 mm longae, superne ciliatae; stamina 3, antheris flavis, 5~6 mm longis; ovarium longe ovatum, nitidum, stylus 1, stigmata 3, sparse plumosa. Caryopsis elliptica, viridis, nitida, 4~5 mm longa, 2~2.5 mm diam., a ventre canaliculata, stylus persistens. Turiones Majo germinantes. Floret & Frf. Majo.

总状花序顶生,排列紧密,紫色,含多数小穗,长3~3.5(4)cm,基部具3~4枚佛焰苞;其佛焰苞常稍长于花序,初时顶端具缩小叶,花序从佛焰苞开口一侧露出。小穗柄长1~1.5(2)mm,无毛;小穗含3~5朵小花,长1.2~1.5 cm,无毛;小穗轴节间长0.5~1 mm;颖片2,披针形,无毛,第一颖长6~10 mm,第二颖长10~13 mm;外稃长1.3~1.5 cm,纸质,具5脉,先端细长渐尖;内稃长8~9 mm,背部具2脊,脊上具短纤毛,脊间纵脉不明显,先端2裂;鳞被3,前方2片长约1 mm,后方1片长约1.5 mm,上部边缘具纤毛;雄蕊3,花药黄色,长5~6 mm;子房长卵形,光滑,花柱1,柱头3,稀疏羽毛状。颖果椭圆形,绿色,光滑,长4~5 mm,直径2~2.5 mm,具浅腹沟,具宿存花柱。笋期5月。花、果期5月。

Chongqing(重庆):Wuxi(巫溪),Hongchiba(红池坝),alt. 2 300~2 750 m,2006-05-30,(易同培)06021(specimen from locality of the type species, SIFS = SAUD).

窝竹过去未曾采到过花标本,这次是第一次采到箭竹属(*Fargesia* Franchet emend. Yi)圆芽箭竹组(Sect. Ampullares Yi)的有花果标本,实属难得。根据窝竹花枝形态和花的构造,可以清晰地表明圆芽箭竹组与箭竹属关键性特征完全一致,从而该组种类无疑应为箭竹属成员,其不同仅在于秆芽的形态。

西藏新小竹 人索、打奔(均门巴语,西藏墨脱)

Neomicrocalamus microphyllus Hsueh et Yi in Jurn. Bamb. Res. **2**(1):35. f. 5. 1983;Fl. Xizang. 5:50. f. 23. 1987;Fl. Reip. Pop. Sin. 9(1):46. pl. 11:1~4. 1996. —*Racemobambos prainii* Gamble auct. Keng f. et Wen:D. Z. Li in Acta Bot. Yunnan. **22**(1):45. 2000.

根据1975年《国际植物命名法规》(列宁格勒法规 Leningrad Code)规则第7.5条款规定:"后选

模式是在发表时未曾指定模式，或者在主模式失踪期间，从原始材料中选取出来充当命名模式的那一份标本或其他分子。当种或种以下的名称的著者曾指定两个或更多标本（例如雄性的或雌性的、有花的或有果的标本等）为模式时，则必须从它们之中选取后选模式。"1983 年我们发表西藏新小竹（*Neomicrocalamus microphyllus* Hsueh et Yi）时，曾指定易同培 77181 号标本（营养体）为模式，同时也指定王从皎 1285 号标本（花枝）为模式。当时出于竹子不易开花，指定营养体和花枝各一号标本为模式以方便实际应用。但是，这种考虑和作法不符和命名法规规则。据此，我们曾在《西藏植物志》以易同培 77181 号标本为后选模式（1987，见上列参考文献），现重申仍以标本采集最早的易同培 77181 为后选模式（Yi Tongpei 77181，lectotype，SIFS = SAUD）。

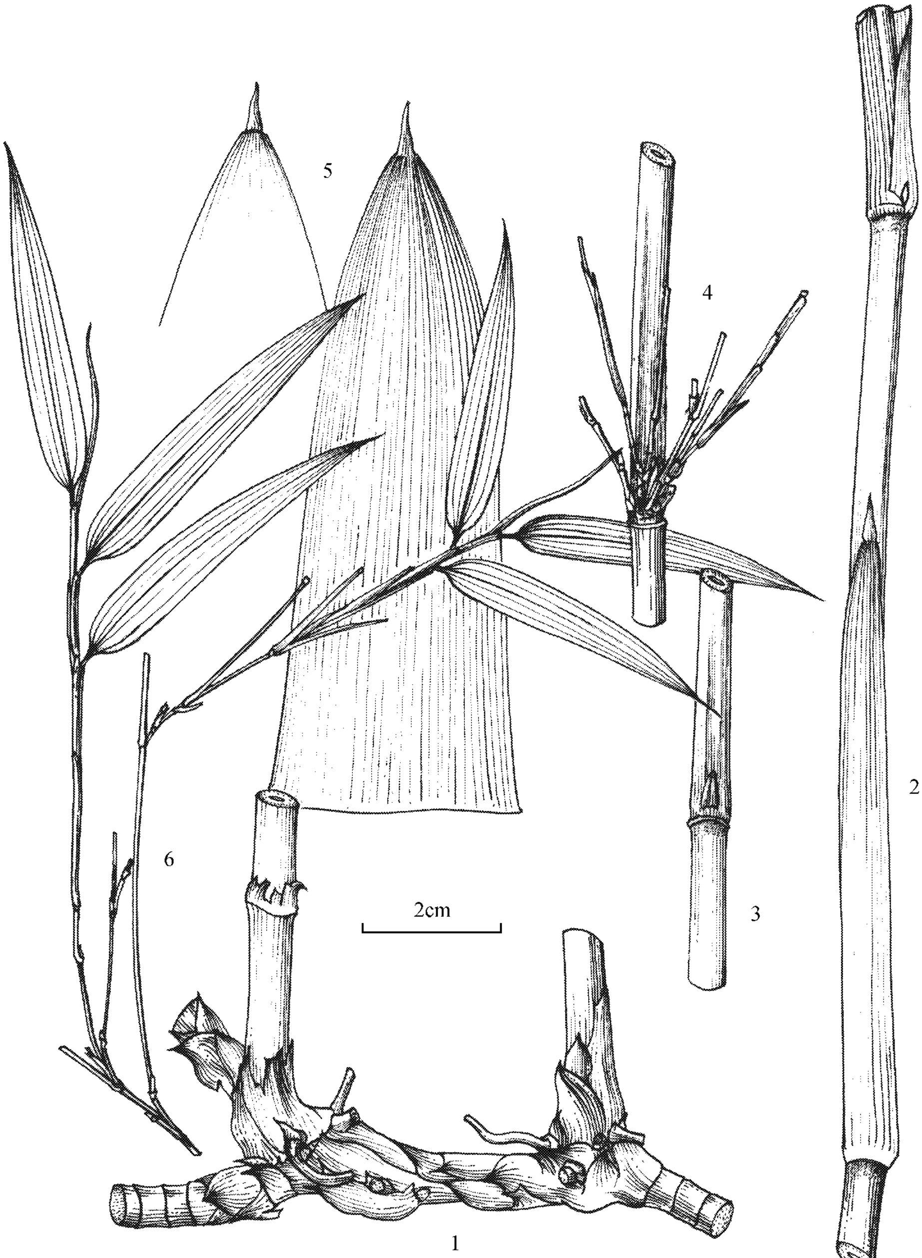


图 1　打母牛　1. 地下茎及秆基部；2. 秆之一段具秆箨；3. 秆之一节，示秆芽；4. 秆之一节，示分枝；5. 秆箨；6. 具叶小枝（杨林根据易同培 06052 号标本绘）

Fig. 1　*Fargesia damuniu* Yi et J. Y. Shi　1. Rhizome with basal part of culm；2. A part of culm with sheath；3. A node of culm showing its bud；4. A node of culm showing its branching；5. Culm-sheath；6. Branchlet with leaves　（Drawn by L. Yang from the type gathering T. P. Yi 06052）

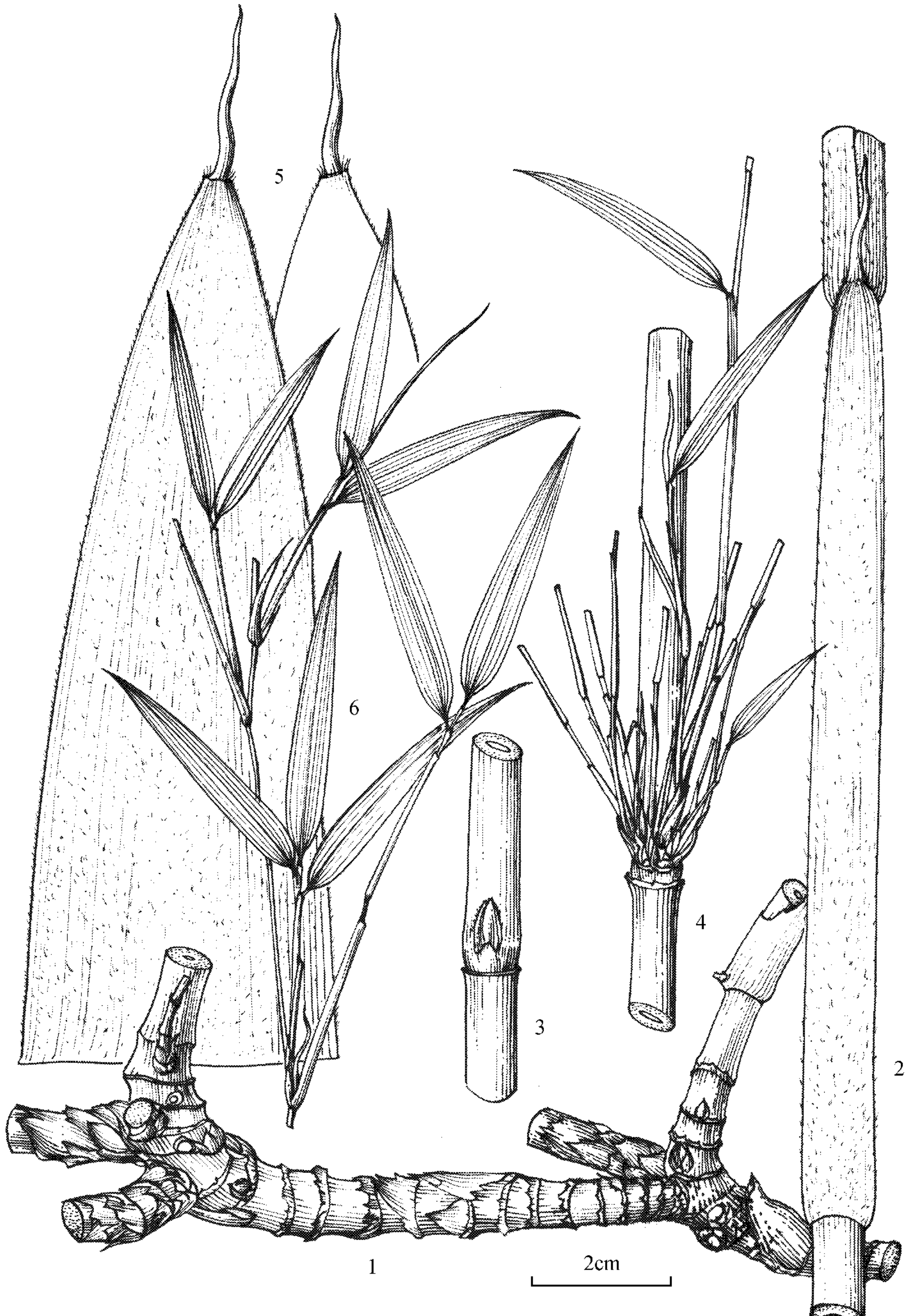


图2 扭马 1.地下茎及秆基部;2.秆之一段具秆箨;3.秆之一节,示秆芽;4.秆之一节,示分枝;5.秆箨;6.具叶小枝(杨林根据易同培06050号标本绘)

Fig. 2 *Fargesia yajiangensis* Yi et J. Y. Shi 1. Rhizome with basal part of culm; 2. A part of culm with sheath; 3. A node of culm showing its bud; 4. A node of culm showing its branching; 5. Culm-sheath; 6. Branchlet with leaves (Drawn by L. Yang from the type gathering T. P. Yi 06050)

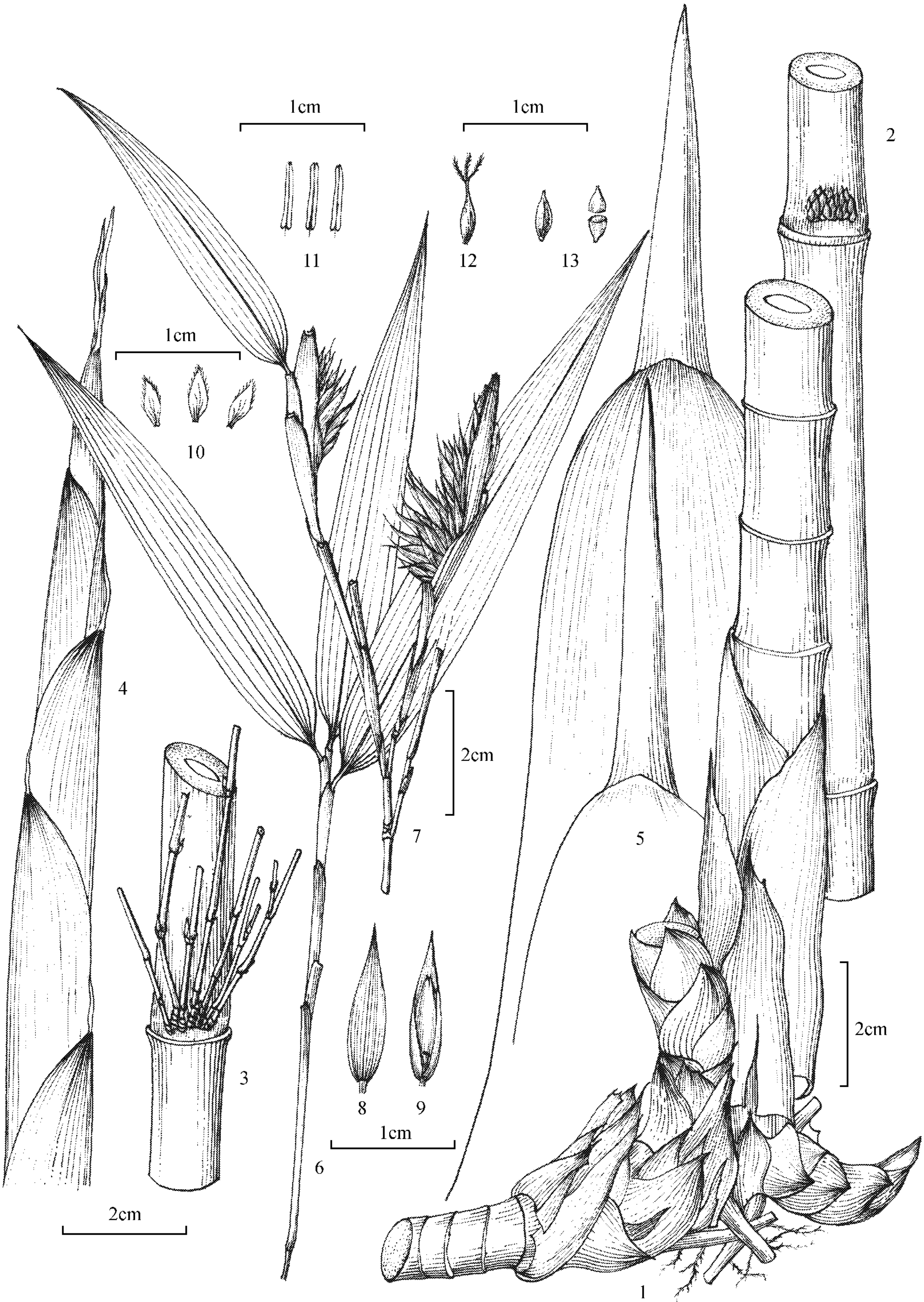


图 3 窝竹 1. 地下茎及秆基部；2. 秆之一部分，示秆芽；3. 秆之一节，示分枝；4. 笋；5. 秆箨；6. 具叶小枝；7. 花枝；8. 小花背面观；9. 小花腹面观；10. 鳞被；11. 雄蕊；12. 雌蕊；13. 颖果 （杨林根据易同培 06021 号标本绘）

Fig. 3 *Fargesia brevissima* Yi 1. Rhizome with basal part of culm; 2. A part of culm showing its buds; 3. A node of culm showing its branching; 4. Bamboo shoot; 5. Culm-sheath; 6. Branchlet with leaves; 7. Flowering branch; 8. Dorsal view of the floret; 9. Ventral view of the floret; 10. Lodicules; 11. Stamens; 12. Pistil; 13. Caryopsis (Drawn by L. Yang from the specimen gathering T. P. Yi 06021)